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ABSTRACT

A study of the psychological differences between maleness and femaleness is presented. The sample studied consisted of four groups: (1) 24 pre-service nursing trainees, all female; (2) 57 introductory psychology students, 31 females and 26 males; (3) 19 caucasian non-college graduate adults, 11 females and 8 males; and (4) 27 radical feminists. Instruments used were Robert May's projective test technique, the Sex Role Stereotype Scale developed by Rosenkrantz, Broverman et al., Gough's scale for assessing "psychological femininity" and the process of asking the subject what he thinks. A 4 X 3 X 2 multivariate analysis of variance for female subjects and a 2 X 3 X 2 multivariate analysis of variance for male subjects were conducted to test for main effects and interactions of group membership, marital status, and having children or not on the eight dependent variables derived from the four sex role instruments. The results of the study showe. the following two consistencies: (1) males receive substantially more masculine scores on the Sex-Role Stereotype Scale and the Gough Scale than women if the women's scores across the four groups are combined; and (2) one's peer group appears to influence the expression of sex-typed behaviors and dispositions. As to the validity of sex-role assessment, current tests and scales do no distinguish among the differing degrees of significance of various sex-typed behaviors but rather sum or average across various items of sex-typed behavior. (CK)

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THE VICISSITUDES OF SEX-ROLE ASSESSMENT

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It is contended that maleness and femaleness extend beyond biology into "subtleties of thought, feeling, imagination and mannerism (May 1966). The process by which such a delicate yet pervasive feat is accomplished is usually assumed to be that of sex-role socialization: the individual gradually learns a culturally determined configuration of attitudes and propensities for certain actions over others. Presumably one configuration exists for females, another for males with a fair amount of overlap between them. Fortunately or unfortunately, each psychologist has been rather prone to develop his own psychological instrument to measure sex differences in sex-role socialization. The problem then arises whether the two (or three or four, etc.) instruments even measure relatively the same thing, much less show agreement in prediction of femininity or masculinity. The intention of the present study is to examine the predictive validity of three currently used sex-role assessment instruments and subjects' self-report as administered to four different groups of subjects. The instruments are May's projective

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technique for studying gender identity (May, 1966, 1967, 1971), the Sex-role Stereotype Scale developed by Rosenkrantz, et al. (1968), and Gough's Psychological Femininity Scale (1952). Further variables to be examined in relation to performance on the instruments are marital status, having children or not, age, and years completed in school. These variables appeared relevant in Barrows' and Zuckerman's investigation with male subjects of the construct validity of masculinity-femininity tests (1960). In addition, an attempt is made to evaluate, on the basis of the instruments involved, whether gender identification can be distinguished from preference for various sex-typed behaviors.

Method

Sample

The sample consists of four groups: (1) 24 pre-service nursing trainees, all female, mean age is 26.88 years; (2) 57 introductory psychology students, 31 females with a mean age of 20.71 and 26 males with a mean age of 24.63; (3) 19 caucasian non-college graduate adults, 11 females with a mean age of 36.00 and 8 males with a mean age of 32.57; and (4) 27 radical feminists with a mean age of 36.93, yielding a total sample size of 127. It should be noted that this last group of women are not merely casual sympathizers toward feminism but are deeply involved in political, organizational, or instructional capacities in which they work toward their feminist goals. All subjects were residents of the San Francisco Bay Area; the data were collected in 1972.

Instruments

The first instrument given was Robert May's projective test technique (May, 1966, 1967, 1971), which presumably assesses an individual's sex-typed fantasy pattern and thus taps his underlying gender identification. Subjects are shown two tension-filled TAT type pictures. In the present study a picture of a matador and one of a trapeze couple in mid-air were used. Male subjects are supposed to show a fantasy pattern of the following sequence: (a) positive events or anticipation, (b) pivotal incident, i.e., the turning point in the story, and (c) a negative ending or denouement. Female subjects are supposed to show a reversal of this pattern: (a) negative events or anticipation, (b) pivotal incident, and (c) a positive ending. May refers to the negative and positive patterns as deprivation and enhancement, respectively. Underlying these different fantasy patterns is a modified Freudian rationale. The male pattern indicates fear of failure or, alternately, the fantasy analog for erection, climax, and detumescence. The female pattern indicates masochism-brings-reward, or "suffer and endure, and in the end you will be rewarded". Cinderella and Snow White are prototypical of the female fantasy pattern. It is interesting to note that few protagonists in our traditional folk tales demonstrate the masculine pattern, although the villains in our folk tales seem to experience the masculine pattern, i.e., the giant in Jack and the Beanstalk literally falls down to the earth, etc.

In the present study, scoring of the subjects' fantasy-stories was

carried out independently by two trained judges without knowledge of the respondents' sex. The reliability coefficients were .86 and .77 for females' trapeze and matador stories respectively and .51 and .87 for males' trapeze and matador stories respectively. Where discrepant, the judges' scores were averaged to yield the final scores used in the analyses.

In addition to May's own investigations with this technique, the author is aware of only one other supportive study (Cramer and Bryson, 1973) in which it was found that girls acquire the feminine pattern in late childhood while boys show the masculine pattern already at a young age (ca. 5 years). In early childhood the little girls appear to be indistinguishable from the boys in fantasy pattern.

The second instrument used was the Sex Role Stereotype Scale developed by Rosenkrantz, Broverman et al. (1968) and since used in various other investigations (I. Broverman et al., 1970; S. Vogel et al., 1970; L. Ellis and P. Bentler, 1973). It is similar in format to the semantic differential method: the subject rates him- or herself on a 7-point scale on a particular bipolar trait or behavior (e.g., non-aggressive-aggressive, passive-active, etc.). These traits and behaviors have been derived by Rosenkrantz et al. (1968) as representing characteristics differentiated according to sex role. There are 82 such traits in the scale used in the present study with a high score indicating relative masculinity.

The third instrument is Gough's scale for assessing "psychological femininity" (1952). It is composed of 58 MMPI items which statistically

differentiate males from females (that is, the items did so in 1952). The items range from indicating a preference for some activity (e.g., "I would like the work of a librarian," answer true for femininity) to childhood recollections (e.g., "I was hardly ever spanked or whipped as a child", answer true for femininity). The higher the score obtained, the more 'feminine' is the individual on this scale.

The fourth assessment procedure is in the style of Gordon Allport: ask the subject what he thinks. The subject is presented with a 10-point scale ranging from not at all feminine to very feminine for female respondents and from not at all masculine to very masculine for male respondents. The actual number on the scale selected by the subject is less important than the statement he is asked to give about his reasons for the self-rank that he selected. The reasons given by the subjects were analyzed and nine categories of responses were empirically derived. The nine categories are conceptually ordered, progressing from external evaluation of self to a more internal, reflective evaluation of self. They are as follows:

1. Masculinity or femininity is perceived in the self according to external evaluation by others about oneself. (Example: female S: "Probably because others think, and want to think, of me as being feminine, so I try extra hard towards being that way. Because of my efforts, I feel that I am very feminine".)
2. Masculine or feminine stereotypic role characteristics are invoked as the basis for the self-rank. (Example:

female S: "I walk, stand, and sit femininely. I am as gentle as I can be. I desire to marry and be a housewife and mother. I believe it is good to be submissive, as long as one isn't submitting to something wrong. I don't think it is necessary to display one's body. I try to act accordingly".)

3. The self-rank is based on a denial of having stereotypic traits of the opposite sex. (Example: male S: "Because I am not at all feminine and I don't like the new female look all the so-called men are wearing".)

4. Vague feelings about the variability of masculinity and femininity are mentioned as the basis for self-rank. (Example: female S: "Because I can be very feminine at times but then again I may not be".)

5. The self-rank appears to be based on an emphatic self-conviction and/or liking of being female or male. (Example: male S: "To be a man is to be myself".)

6. Opposite sex-role characteristics are invoked in the self-rank, i.e., female subject admits to or states having specific masculine traits and vice-versa for male subjects. (Example: male S: "I sometimes let out my emotions and cry like girls do"; female S: "Because I like sports and am very athletic and those are supposed to be considered masculine".)

7. The self-rank is based on having both masculine and feminine role qualities; the terms masculinity and femininity are perceived as problematic. (Example: female S: "I am rather confused as to what masculine and feminine are. I know I am physically attractive as a female and can be very affectionate, which are supposed to be feminine qualities. I think I am also practical, logical, and worldly which are really considered masculine qualities".)

8. The subject rejects roles, be they masculine or feminine; sex roles are perceived negatively, that is, as constrictive to self-expression. (Example: female S: "Because I don't like to dress up. I don't like to play stupid girlish roles of being coy and inferior when I'm around men. I enjoy sports; I like to go camping and hiking, etc.".)

9. Reflective and relatively articulate evaluation of sex-roles is made as the basis for the self-rank; subject differentiates a concept of self in terms of gender identification and behavioral preferences. (Example: male S: "What is the definition of masculinity? I try to live and act according to whatever is right for me. If I want to cook, I cook. If I want to cry, I cry.

If these are feminine characteristics, then I guess all men have some in them. I'm emotional and that is considered a weak characteristic also. However, I think it takes a man to be able to say what his hang-ups are".)

It is apparent from the examples that a strict categorization is difficult, and category blending occurs frequently. In such cases the category assignment was made on the basis of the dominant or over-all tone of a subject's response. The percentile distribution of the categories of self-rank according to group and sex within group are noted in Table I.

Results

A 4 X 3 X 2 multivariate analysis of variance for female subjects and a 2 X 3 X 2 multivariate analysis of variance for male subjects were conducted to test for main effects and interactions of group membership, marital status, and having children or not on the eight dependent variables derived from the four sex role instruments (viz. fantasy score on trapeze picture, fantasy score on matador picture, combined fantasy score, Sex-Role Stereotype mean, Sex-Role Stereotype average standard deviation, Gough Scale mean, self-rank, and category of self-rank). An overall intercorrelation of all variables, including age and number of years completed in school, was also calculated (separate for each sex). Means for all groups and sex within group for all scores are noted in Table 2.

The multivariate analysis of variance for females yielded a significant multivariate F for the main effect of groups ($F = 2.52$, $p < .0003$ d.f. = 3 and 82). Post hoc contrasts using θ s (theta s) were calculated to establish

confidence intervals, with the result that the radical feminists significantly differed on the Sex Role Stereotype Scale (in the direction of greater masculinity), on the Gough Femininity Scale (greater masculinity), and on the category of self-rank (in the direction of more internal evaluation of femininity) from the introductory psychology females, nursing trainees, and non-college females. The non-college females significantly differed from the three other groups on the trapeze picture in the direction of greater femininity. Main effects for marital status and having children or not were not significant, nor were the interactions. In order to calculate a statistic in a multivariate design approximating the proportion of variance accounted for by the factor of group membership, $1 - \Lambda = \eta^2$, (1 - Wilke's lambda = eta^2) was computed, yielding a value of .58 (Cooley and Lohnes, 1971, p. 277).

The main effect for groups for males (introductory psychology students and non-college males) was not significant, nor were marital status, having children, or the interactions among these variables. However, it should be kept in mind that the two groups are greatly discrepant in size and that valid statistical comparisons may not be possible.

A one-way multivariate analysis of variance was conducted for the effect of sex on the eight dependent variables. The multivariate F was significant ($F = 7.51$, $p < .0001$, d.f. = 1 and 103). Males significantly differed from females on the Sex Role Stereotype Scale and the Gough Scale (both in the direction of greater masculinity). This appears to be more an effect of the comparison between males and females in the nursing trainee,

introductory psychology, and non-college groups than for the radical feminists, whose mean score on the Sex Role Stereotype Scale actually lies between the mean score for the introductory psychology males and the mean for the non-college males.

The intercorrelations of all scores, age, and years completed in school are noted in Table 3 (females only) and Table 4 (males only). A haphazard picture is presented with zero to moderate correlations occurring through-out, apparently with minimal consistency. Age and years completed in school are only mildly related to performance on the scales and then in rather erratic patterns. Noteworthy is the greater degree of relationship for females between the Gough Scale and the Sex-Role Stereotype Scale than for males on these two scales. The fantasy pattern correlations for both males and females are also inconsistent, and it would seem to indicate that to assess gender identification in this manner is rather doubtful or risky. Masculinity on the Sex-Role Stereotype Scale and the Gough Scale for females correlates at the $p < .01$ level with more internal evaluation of one's femininity in the category of self-rank; category of self-rank for males appears to have a moderate degree of relationship ($r = -.31$) with increased femininity on the Sex-Role Stereotype Scale, although it just misses significance. A negligible degree of relationship exists between category of self-rank and performance on the Gough Scale for male subjects.

Discussion and Conclusion

The mixed results yield a couple of consistencies as well as indicating

that sex-role tests are rather variable in their predictions of sex differences in behavioral functioning and emotional and/or attitudinal dispositions. The consistencies are (a) males receive substantially more masculine scores on the Sex-Role Stereotype Scale and the Gough Scale than women, if the women's scores across the four groups are combined. However, the correlation between the Sex-Role Stereotype Scale and the Gough Scale for males is only -.27 (a high score on the Sex-Role Stereotype Scale indicates relative masculinity while a low score on the Gough Scale indicates relative masculinity, hence the negative correlation coefficient). (b) One's peer group appears to influence the expression of sex-typed behaviors and dispositions. This seems particularly applicable to the radical feminist group who derive more articulate support from other feminists and even perhaps from the media for their behavioral preferences, which might be expected more frequently to run counter to the traditional feminine stereotype.

It might be argued that behavioral preference is primarily what is assessed by the Sex-Role Stereotype Scale and the Gough Scale. These two scales may, then, be more a reflection of the current attitudes and expectations that are held by a peer group (or even sub-culture), whereas gender identification may have less to do with relative masculinity or femininity (defined as reflections of peer group attitudes) and more to do with self-acceptance of being male or female. Gender identification may also be more of an early cognitive judgment, crystallizing into basic self-categorization as male or female such as suggested by Kohlberg (1966).

The categories of self-rank used in the present study were an attempt to probe this sort of self-judgment as male or female. However, it is just as likely that what was tapped was degree of self-reflection and perhaps a construct such as external-internal locus of control. Lynn (1959) offers a cogent review of the distinctions between sex identification, sex role preference, and sex role adoption, and makes clear that individuals need not be consistent across these classifications. Consistent with Lynn's argument is the trend in psychology to view identification as the more covert, latent, or "deep structure" process and sex-typed behavioral preference as an expression, somewhat related to the identification, but on an overt, manifest, or "surface structure" level. Sex-typed behavioral preference takes on still further dimensions, however, when one considers the distinction between the frequency of occurrence of sex-typed characteristics in an individual and the significance or saliency of <u>particular</u> sex-typed characteristics. For example, woman A is logical, practical, reflective, self-confident, and makes decisions easily; woman B is aggressive, ambitious, and independent. Woman B very likely affects her social environment with considerably greater impact than woman A, and woman B is more likely perceived as masculine by others than woman A. the point to be made with regard to the validity of sex-role assessment is that our current tests and scales do not distinguish among the differing degrees of significance of various sex-typed behaviors but instead sum or average across various items of sex-typed behavior. The effect of such averaging is to wash out the differential saliency of certain behaviors.

Finally, it should be mentioned that the rather low predictive validity of sex-role tests found in this investigation is congruent with the results of Barrows' and Zuckerman's analysis of three masculinity-femininity tests (1960). They report on their all-male sample correlations ranging from .31 to .34 among the three tests used (viz. the Guilford-Zimmerman Temperament Survey, the MMPI femininity scale, and the Strong Vocational M-F scale).

The conclusion to be drawn from this investigation might be that we need to focus and define more carefully what we think we are assessing in the area of sex-role behavior and gender identification before we carry out empirical research problems involving these variables. How valid are the research studies already in print which have used sex-role assessment procedures of doubtful validity in grouping their subjects along some masculinity-femininity continuum prior to some experimental manipulation or condition? The vicissitudes of sex-role assessment, while testifying to the complexity and variability of human beings, deserve careful scrutiny by the prospective researcher and sex-role test developer.

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Table 1

Percentile Distribution of Self-Rank Category Across Groups

Category	1	2	3	4	5	6	7	8	9
Group									
Nurses	16%	12%	4%	0%	12%	16%	16%	12%	4%
Intro. Psych. Males	9%	29%	19%	0%	14%	9%	9%	0%	9%
Intro. Psych. Females	15%	26%	0%	15%	15%	11%	7%	11%	0%
Non-College Males	14%	43%	29%	14%	0%	0%	0%	0%	0%
Non-College Females	0%	11%	0%	22%	44%	11%	11%	0%	0%
Radical Feminists	4%	17%	0%	0%	13%	0%	38%	21%	8%

Table 2

Means on Sex Role Tests

	Fantasy No. 1* Trapeze	Fantasy No. 2* Matador	Combined Fantasy* Scores	Stereotype Scale $\bar{X}$ Score	Stereotype Scale Ave. S.D.	Gough Score	Self-Rank	Category of Self-Rank	N
Nursing Trainees	20.20	20.3	20.1	40.62	13.85	34.88	7.2	4.7	26
Intro. Psych. Females	20.58	18.20	19.38	39.67	12.95	34.48	7.4	4.1	31
Intro. Psych. Males	20.27	20.22	20.42	42.40	13.54	27.96	7.5	4.0	26
Non-College Females	23.40	18.60	19.75	38.99	14.18	37.64	7.5	4.8	11
Non-College Males	19.71	21.67	20.50	43.22	23.82	25.75	7.0	2.4	8
Radical Feminists	19.52	19.35	19.38	42.69	14.05	31.33	6.7	6.1	27

*Raw scores have + or - values; the above scores have been weighted by 20 for purposes of analysis.

Table 3

Intercorrelations of Scores, Age, and Years in School
Females Only

Variables	Fantasy Trapeze[a] 1	Fantasy Matador[a] 2	Comb. Fantasy[a] 3	Stereotype $\bar{X}$[b] 4	Stereotype S.D. 5	Cough[a] 6	Self-Rank 7	Category Self-Rank[c] 8	Age 9	Years in School 10
1	1.00									
2	.19	1.00								
3	.79**	.78**	1.00							
4	-.11	.05	-.04	1.00						
5	-.19	.07	-.04	.24*	1.00					
6	.04	.03	.02	-.53**	-.02	1.00				
7	.09	.27**	.21*	-.29**	.14	.24*	1.00			
8	-.11	.06	.00	.31**	-.10	-.31**	-.23*	1.00		
9	-.05	.02	-.03	.24*	.17	-.12	-.13	.16	1.00	
10	-.21*	.09	-.02	.37**	.14	-.28**	-.13	.39**	.40**	1.00

a: high score indicates femininity
b: high score indicates masculinity
c: high score indicates greater internality

d.f. = 91; * $p < .05$; ** $p < .01$

Table 4

Intercorrelations of Scores, Age, and Years in School
Males Only

Variables	Fantasy Trapeze[a] 1	Fantasy Matador[a] 2	Comb. Fantasy[a] 3	Stereotype $\bar{X}$[b] 4	Stereotype S.D. 5	Gough[b] 6	Self-Rank 7	Category Self-Rank[c] 8	Age 9	Years in School 10
1	1.00									
2	.13	1.00								
3	.71**	.81**	1.00							
4	-.14	.23	.05	1.00						
5	-.11	-.09	-.13	.53**	1.00					
6	.19	-.47**	-.18	-.27	.16	1.00				
7	.13	-.54**	-.28	.12	.26	.47**	1.00			
8	-.34*	-.16	-.19	-.31	-.09	.19	-.01	1.00		
9	.02	.44**	.28	-.10	-.11	-.14	-.44**	.00	1.00	
10	.26	-.17	.10	-.09	-.04	.30	.22	.11	-.04	1.00

a: high score indicates femininity
b: high score indicates masculinity
c: high score indicates greater internality

d.f. = 32; * p .05; ** p .01